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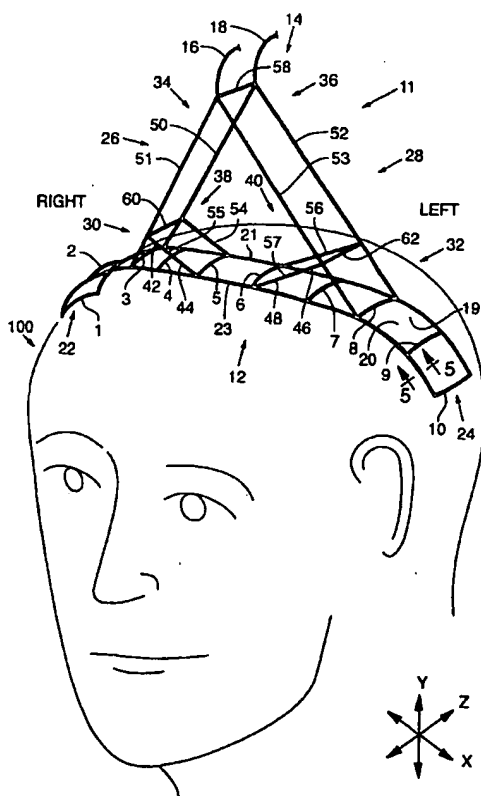
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(54) Title: **COIL FOR MAGNETIC STIMULATION**



(57) Abstract: A magnetic stimulator (11), which may be used as a transcranial magnetic stimulation (TMS) device, and a method for its use are disclosed. The stimulator comprises a frame and an electrically conductive coil having a partially toroidal or ovate base (12) and an outwardly projecting extension portion (14). The frame may be a flexible or malleable material and may be non-conductive. The electrically conductive coil may comprise one or more windings of electrically conductive material (such as a wire) coupled to the frame. The coil is electrically connected to a power supply. The device (11) may be placed adjacent to or in contact with the body of a subject, such as on the head (100) of a subject. The device may be used on humans for treating certain physiological conditions, such as cardiovascular or neurophysiological conditions, or for studying the physiology of the body. This device is useful in studying or treating neurophysiological conditions associated with the deep regions of the brain, such as drug addiction and depression.

WO 02/032504 A3



CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
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MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI,  
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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/50737

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61N2/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 06342 A (EPSTEIN CHARLES M ; DAVEY KENT R (US); NEOTONUS INC (US)) 19 February 1998 (1998-02-19) cited in the application page 6, line 17 -page 8, line 28; figures	1,28,51
A	US 6 066 084 A (EDRICH JOCHEN ET AL) 23 May 2000 (2000-05-23) cited in the application column 4, line 18 -column 5, line 20; figures	1,28,51
A	US 6 086 525 A (EPSTEIN CHARLES M ET AL) 11 July 2000 (2000-07-11) cited in the application column 3, line 27 -column 6, line 40; figures	1,28,51
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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\*Z\* document member of the same patent family

Date of the actual completion of the international search

16 August 2002

Date of mailing of the international search report

23/08/2002

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# INTERNATIONAL SEARCH REPORT

Initial Application No  
PCT/US 01/50737

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 994 015 A (CADWELL JOHN A)  19 February 1991. (1991-02-19)  column 2, line 16 -column 3, line 14;  figures</p>	1,28,51

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/50737

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 44-54  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Diagnostic method practised on the human or animal body (claim 51)  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy (claims 44-50, 52-54)
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

In onal Application No

PCT/US 01/50737

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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